

# Health in Rural Missouri

BIENNIAL REPORT 2018-2019

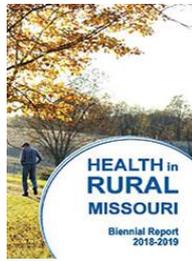


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ANDREW HUNTER

WHITNEY COFFEY

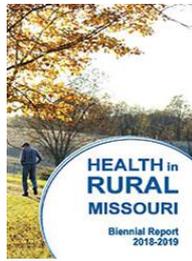
Missouri Department of Health & Senior Services (DHSS)



# Background

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- State Office of Rural Health was established in 1990. It is a part of the Office of Rural Health and Primary Care (ORHPC).
- One of their mandates is to develop a report on a biannual basis describing the health status of rural Missourians.
- Reports dating back to 2006-2007 are available on the [DHSS website](#).



# BHCADD's Role

- Bureau of Health Care Analysis & Data Dissemination (BHCADD) has worked in partnership with SORH for these reports over the last 5 cycles (10 years).
- Division of labor—SORH works with BHCADD to develop a general theme and list of potential variables.
- Bulk of the document is statistical analysis, comparing rural and urban trends for a variety of health conditions and risk factors.
- SORH develops the latter sections of the report discussing health care resources in rural Missouri (e.g.; rural health clinics, health professional shortage areas, FQHCs, etc.), rural health partners, and recommendations.
- Office of Public Information (OPI) lays out the report and prepares it for publication.



# 2018-2019 Biennial Report



This year's report focused on 5 areas:

- Demographic and Population Characteristics
- Social Determinants of Health (SDOH) and Access to Care
- Health Status of Missourians
- Maternal and Child Health
- Health Care in Rural Missouri

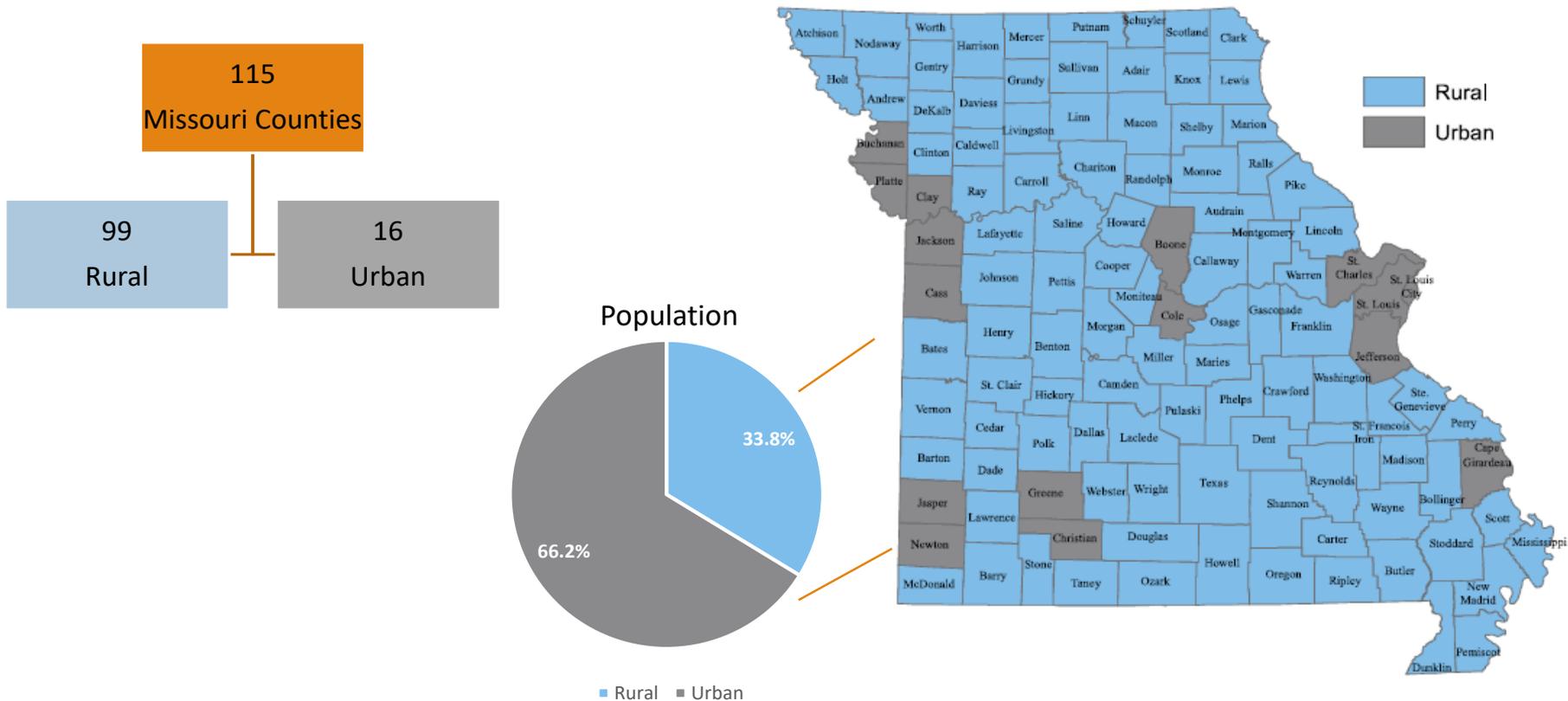


**HEALTH** in  
**RURAL**  
**MISSOURI**

**Biennial Report**  
**2018-2019**



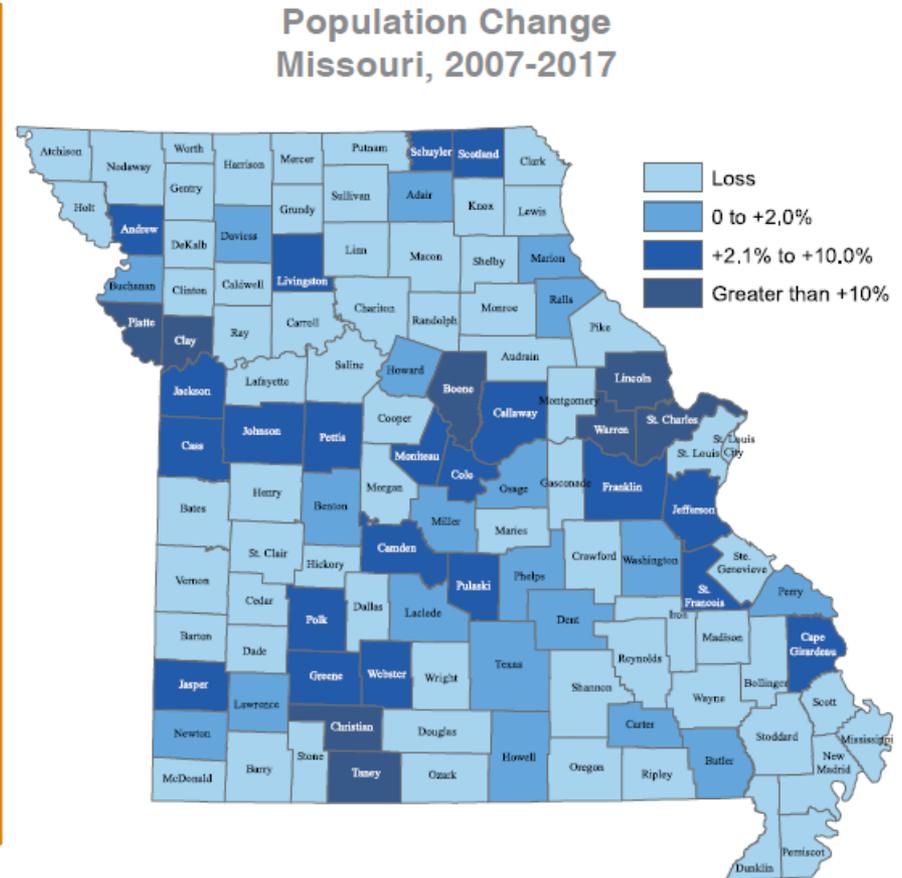
# Rural vs Urban



Source: DHSS, BHCADD

# Population Growth

- Missouri is growing **slower** than national average (3.8% vs 8.1%)
- Rural growth **much slower** than urban, (0.7% vs 5.5%)
- 64 of 99 rural counties experienced **population decline**
- 16 counties (all rural) suffered **population losses** of greater than 5%-- 11 of the 16 were north of the Missouri River
- Taney County was **fastest growing** rural county at 15.3%



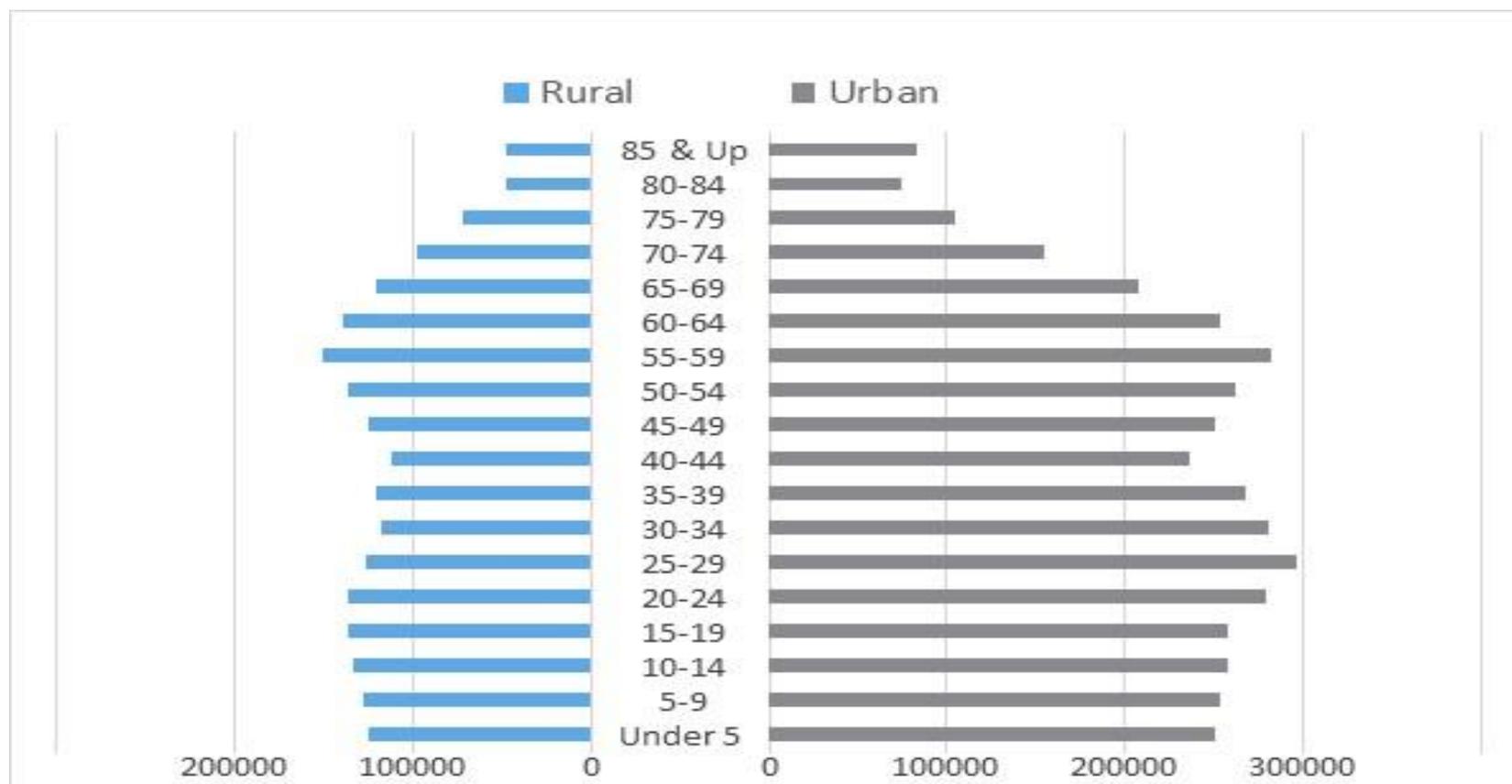
Source: CDC, NCHS

# Natural Increase

	Natural Increase, 2015-2017			Number of Births for Every 1 Death
	Births	Deaths	Natural Increase	
Missouri	222,723	181,500	41,223	1.23
Rural Missouri	73,868	71,586	2,282	1.03
Urban Missouri	148,855	109,914	38,941	1.35

Source: CDC, NCHS

# Aging in Missouri



Source: CDC, NCHS

# Social Determinants of Health

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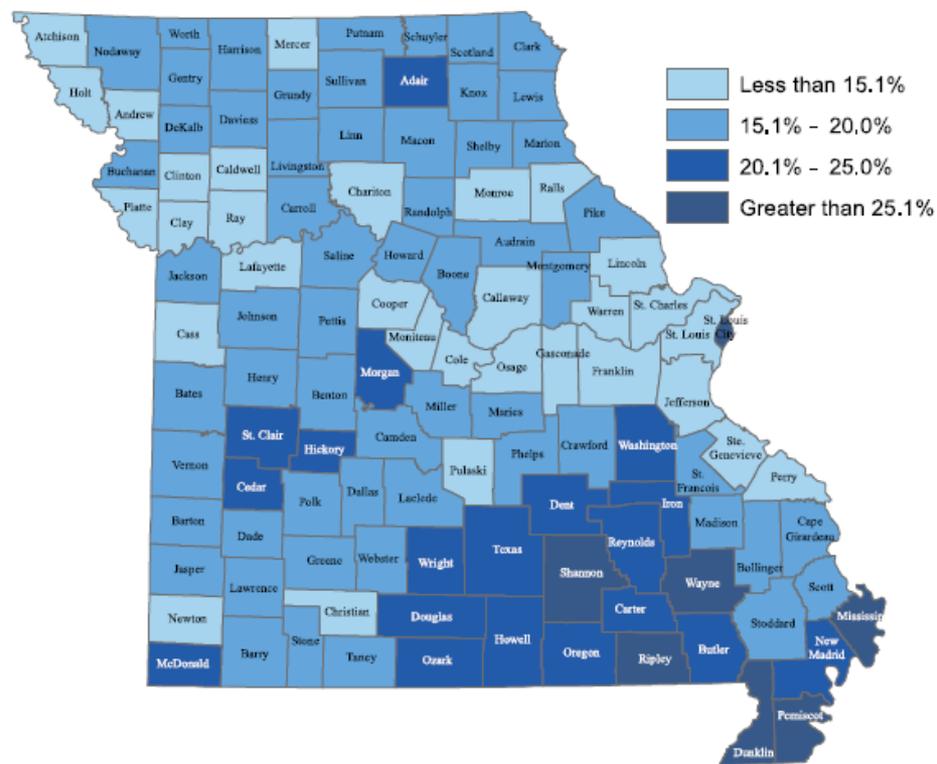
Source: Healthy People 2020



# Economic Stability

- Rural poverty rates are **higher** (17.5% vs 13.3%) than urban rates
- The disparity **even greater** among kids (rural rate 23.4% vs 16.0% for urban)
- 22 rural counties had poverty rates above 20%, while **only St. Louis City** was above 20% for urban
- Highest poverty rates are in **the Bootheel**
- Both rural and urban experienced **small declines** (2.5 percentage points) between 2013 and 2017

Poverty rates  
Missouri, 2013-2017

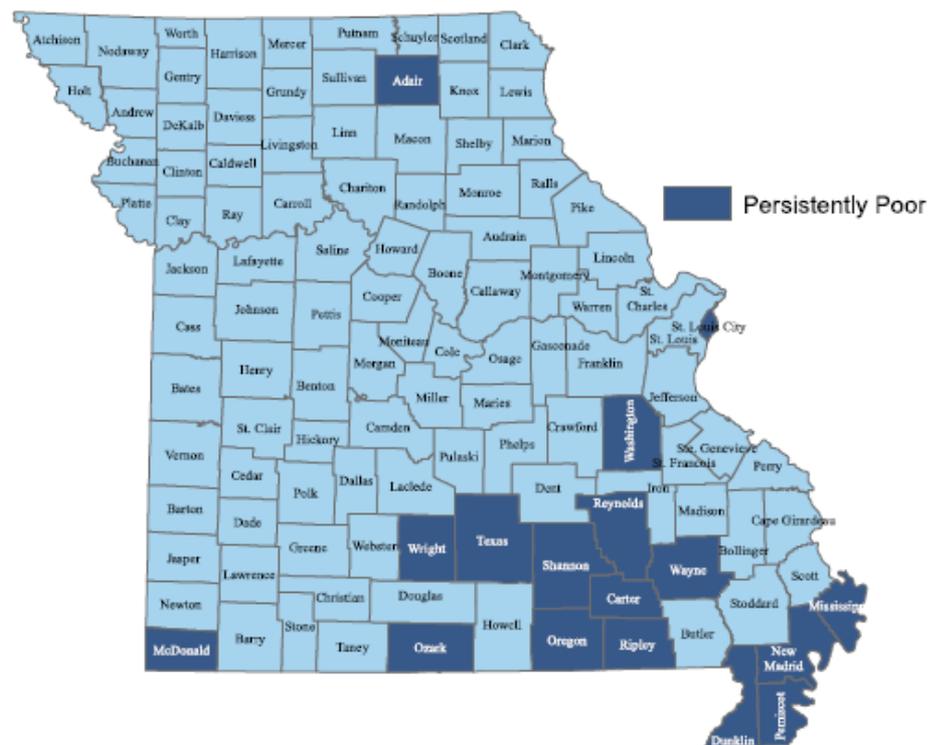


Source: US Census Bureau

# Persistently Poor Counties

- To qualify, must have 20% or higher poverty over **at least 30 years** (based on US Census)
- 17 counties met the US Dept. of Agriculture definition for **persistently poor**
  - 16 were **rural**
- 14 of 17 were located in either **southeast** or **south-central Missouri**

Persistently poor counties  
Missouri, 2017

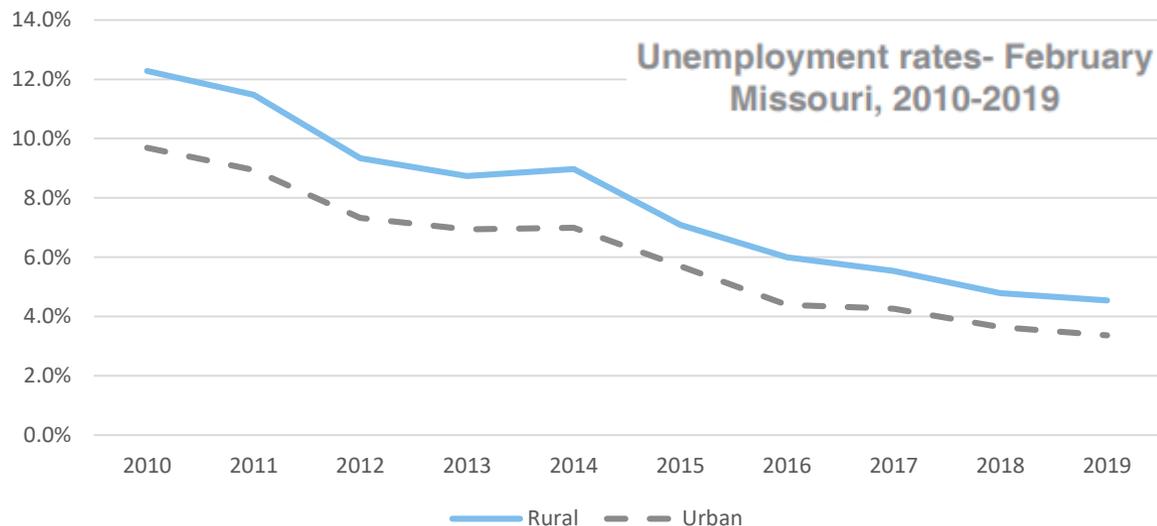


# Unemployment

Unemployment has **declined** by 6-8 percentage points for both rural and urban regions since Feb 2010, which was near the peak of the Great Recession of 2009.

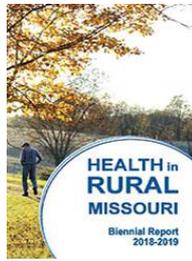
The top 39 **highest** county unemployment rates were rural.

The **gap** between rural and urban unemployment **has shrunk** over the last 10 years but still exists.

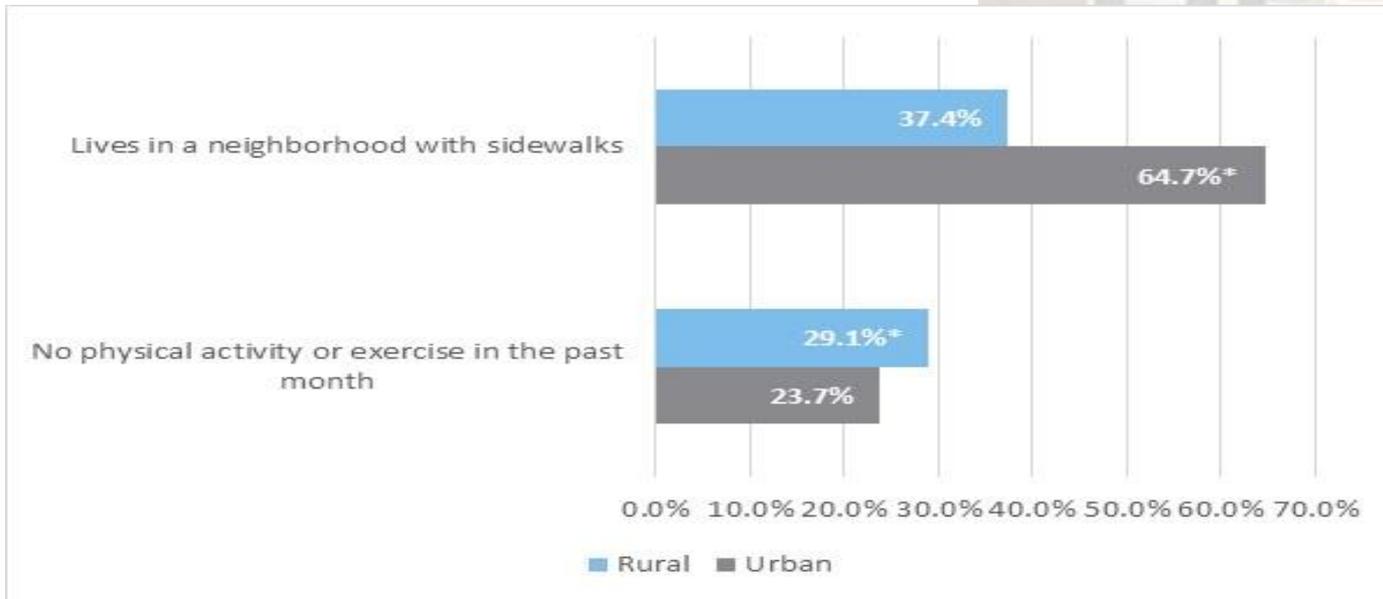


Source: Missouri Economic Research and Information Center (MERIC)

# Neighborhood and Built Environment



According to the CDC, the **built environment** includes all of the physical parts of where we **live** and **work**.

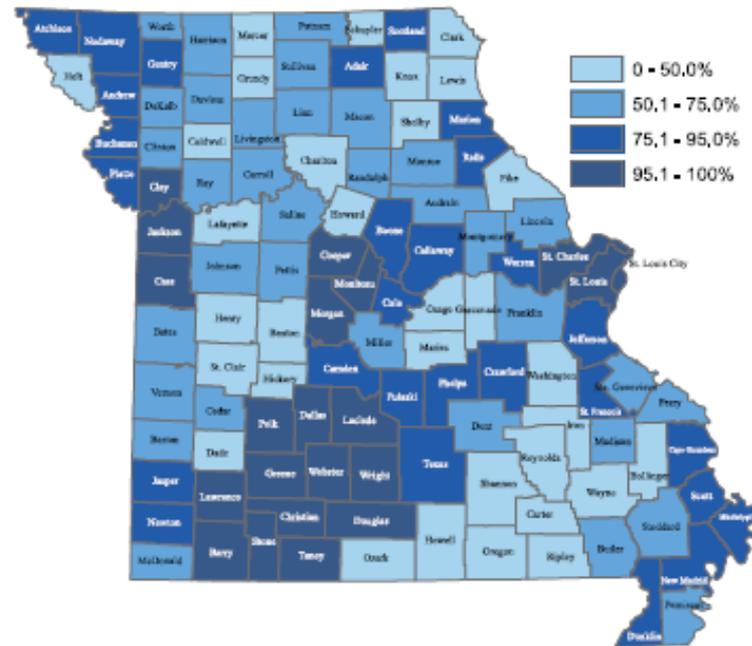


Source: BRFSS

# Internet Access

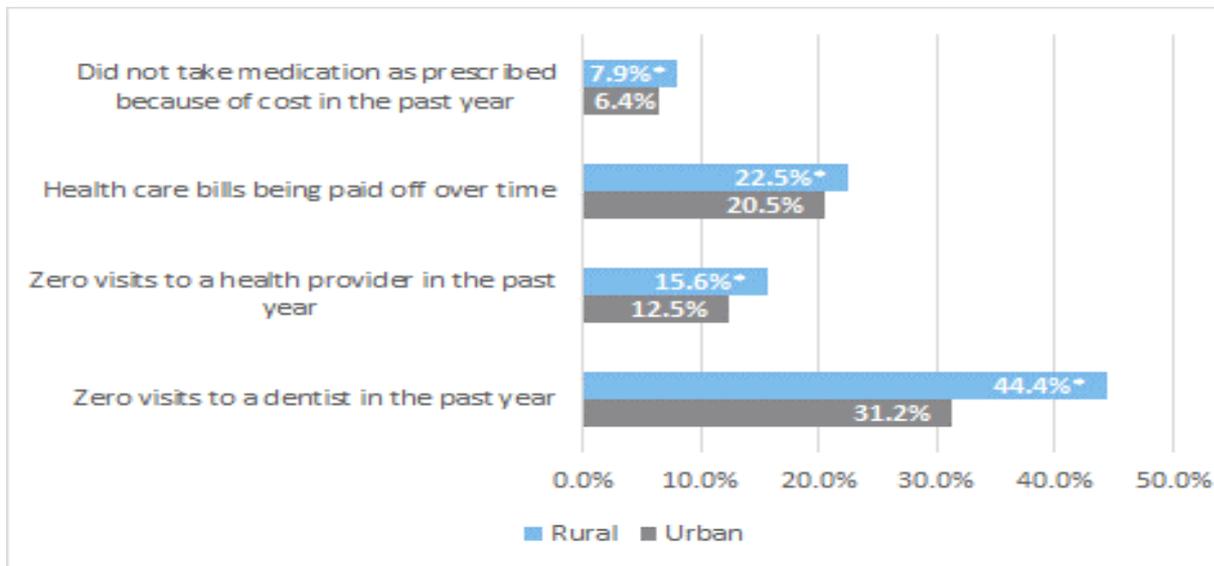
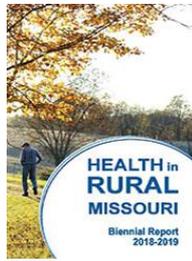
- Only 71% of rural Missourians **have access** to broadband internet, compared to 97.7% for urban areas
- South Central Missouri has a large block of counties with **less than half of their population** having high-speed access
- Generally **high** areas of rural access in the southwest, northwest and the Bootheel

Percent of population with a broadband internet provider  
Missouri, 2017



Source: Federal Communications Commission (FCC)

# Health and Health Care— Access to Care

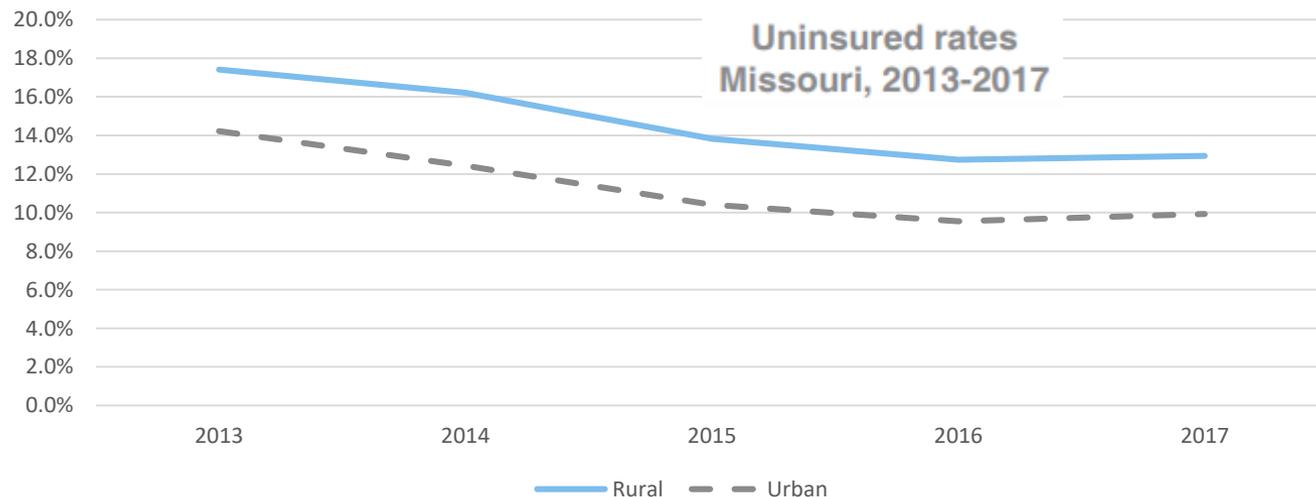


Since the last published *Health in Rural Missouri* report in 2017, five rural, general acute care hospitals **have closed**.

Source: BRFS

# Health Insurance

- The number of uninsured Missourians showed a **steady decline**, 2013-2016.
- 50 out of 99 rural counties **exceeded** a rate of 15% uninsured. (2013-2017)



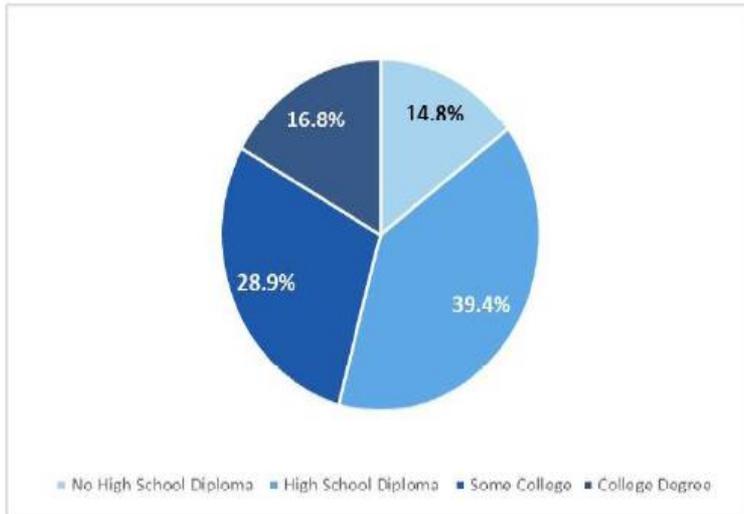
Source: US Census Bureau

# Education

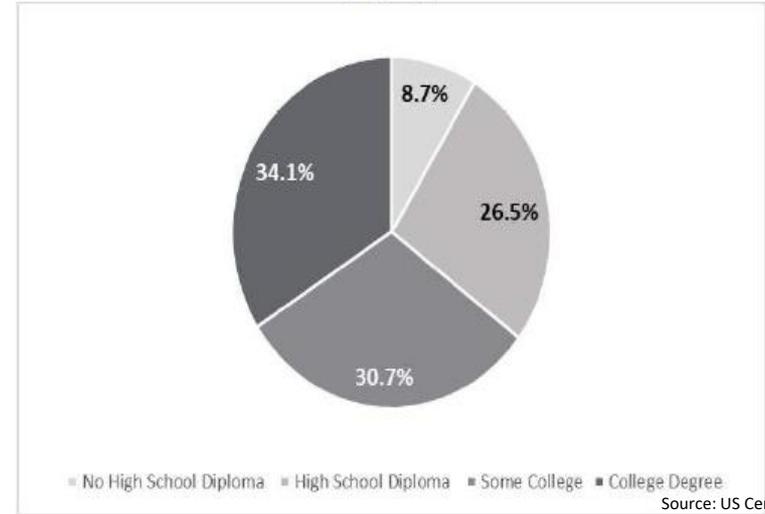
Both rural and urban residents have **similar proportions** of residents who are working towards a degree, achieved some college credits, or have earned a technical or associates degree.

Education rates (for adults over 25 years of age)  
Missouri, 2013-2017

Rural



Urban

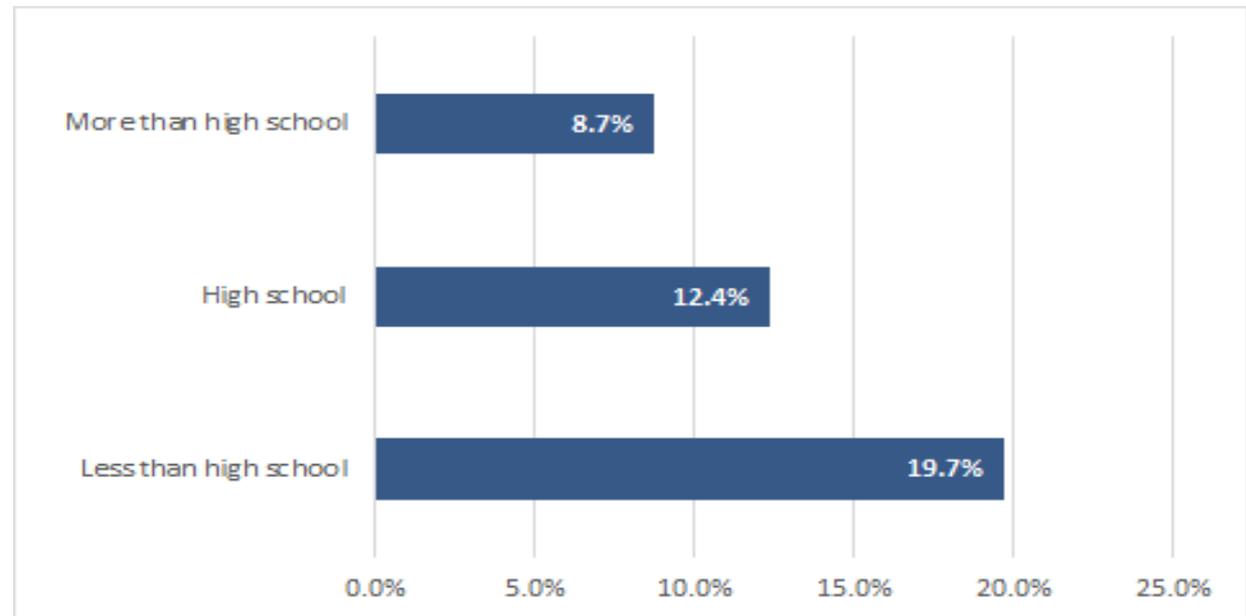


Source: US Census Bureau

# Chronic Disease and Education

Those with less than a high school education are **significantly more likely to report a diagnosis of diabetes** than those who completed high school or had post-secondary schooling.

Diabetes prevalence and education  
Missouri, 2016



Source: BRFSS

# Health Status

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# Life Expectancy

Life expectancy  
Missouri, 2012 and 2017

Life Expectancy (in years)	Rural	Urban	U.S.
2012	76.7	78.3	78.8
2017	76.3	77.7	78.6
Percent Change (2012 & 2017)	-0.52%	-0.77%	-0.25%

*Source: Murphy SL, Xu JQ, Kochanek KD, Arias E. Mortality in the United States, 2017. NCHS Data Brief, no 328. Hyattsville, MD: National Center for Health Statistics. 2018.*

# Leading Causes of Death

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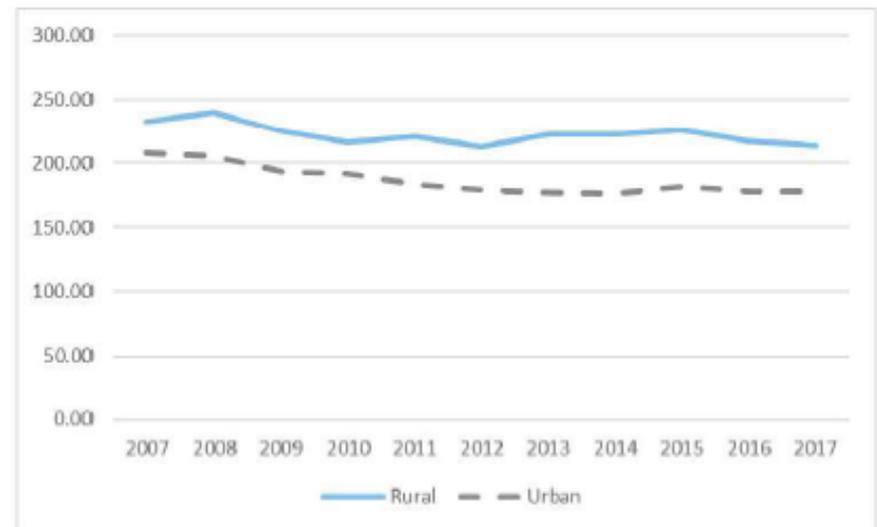
1. Heart Disease
2. Cancer
3. Chronic Lower Respiratory Diseases
4. Accidents/Unintentional Injuries
5. Stroke (Cerebrovascular Diseases)
6. Alzheimer's Disease
7. Diabetes
8. Kidney Disease (Nephritis, Nephrotic Syndrome, and Nephrosis)
9. Influenza and Pneumonia
10. Suicide

Rural counties rates of death are **significantly higher** than urban counties' rates in all ten categories of Missouri's leading causes of death.

# Heart Disease - #1

- Between 2007 and 2017, a Missouri rural resident was 20% **more likely** to die from heart disease than an urban resident
- Heart disease rates have been **declining**, between 2007 and 2017 there was a 12.1% decrease in heart disease deaths

Death rates from heart disease  
Missouri, 2007-2017



*Age-adjusted rates per 100,000 population*

# Cancer - #2

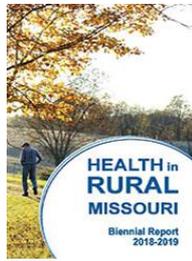
- Data shows **significant downward trends** in cancer mortality for both urban and rural groups
- For lung and colon cancer subtypes, rural counties are at a **significantly greater risk** of death

Leading causes of cancer death  
Missouri, 2007-2017

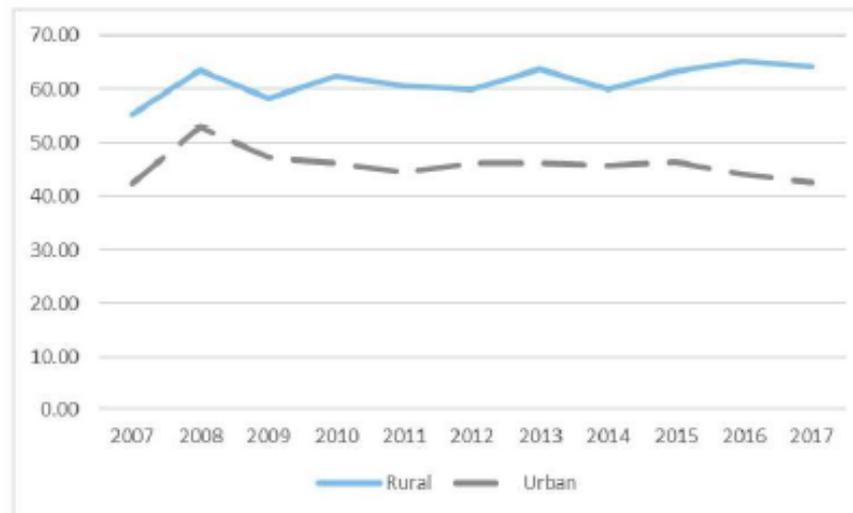
	Rural Rate	Urban Rate
Lung/trachea/bronchus	59.60*	50.74
Breast	22.58	22.51
Colon/rectum/anus	17.63*	15.11
Prostate	19.16	18.58
Pancreas	11.21	11.23

\*indicates a rate that is *statistically significantly* higher, using 95% confidence intervals  
*Age-adjusted rates* per 100,000 population

# Chronic Lower Respiratory Diseases - #3



Death rates from chronic lower respiratory disease  
Missouri, 2007-2017



*Age-adjusted rates per 100,000 population*

Today, rural Missourians are 51% **more likely to die** from CLRD than their urban neighbors, compared to 30% more likely in 2007.

# Accidents/Unintentional Injury

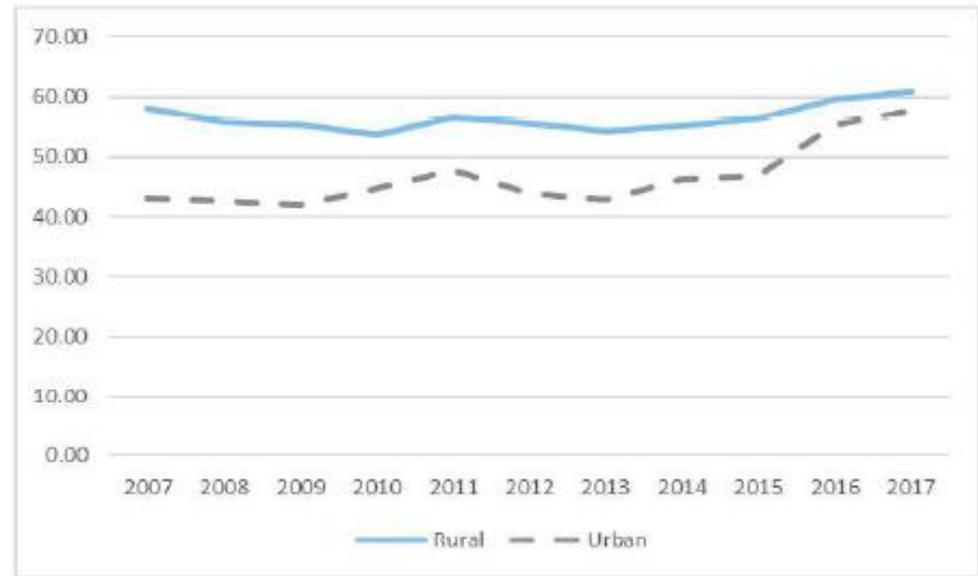
## - #4

Unintentional injuries include, but are not limited to:

- Falls
- Motor Vehicle Accidents (MVA)
- Drug overdose and poisonings
- Fires
- Drownings

Due in large part to falls, individuals age 65 and over have the highest death rates from unintentional injuries for both rural and urban populations.

Deaths from unintentional injury  
Missouri, 2007-2017

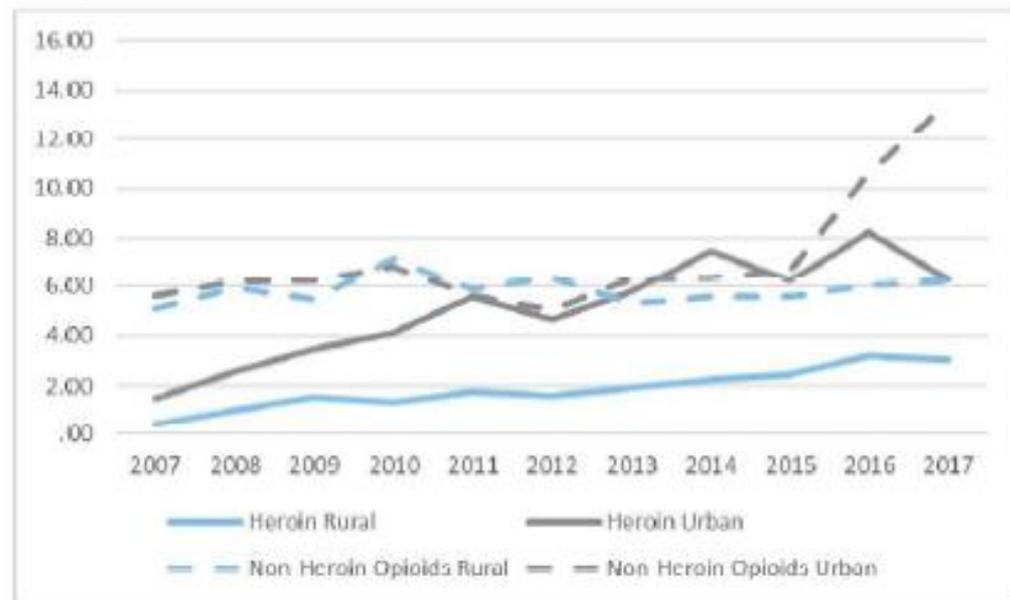
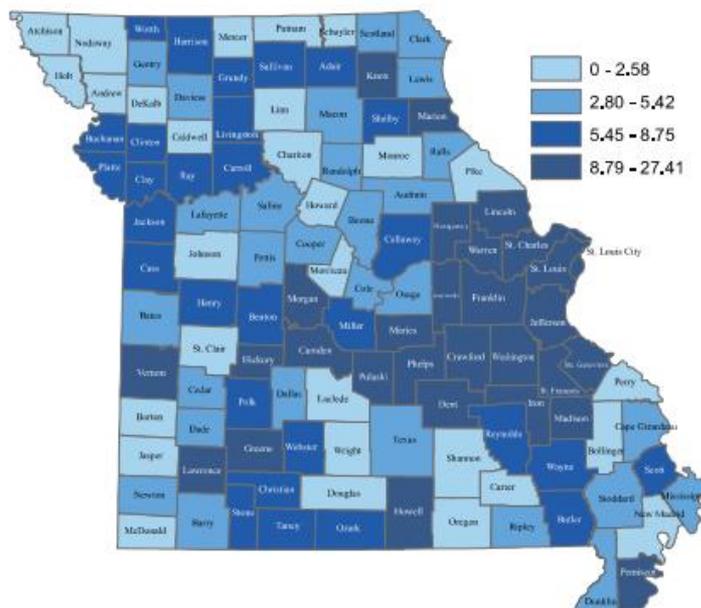


Age-adjusted rates per 100,000 population

# Unintentional Injury: Drug Overdose



Death rates from heroin and non-heroin opioid overdoses  
Missouri, 2007-2017



Age-adjusted rates per 100,000 population

The 2017 opioid overdose mortality rate statewide was nearly 150% **higher** than in 2007.

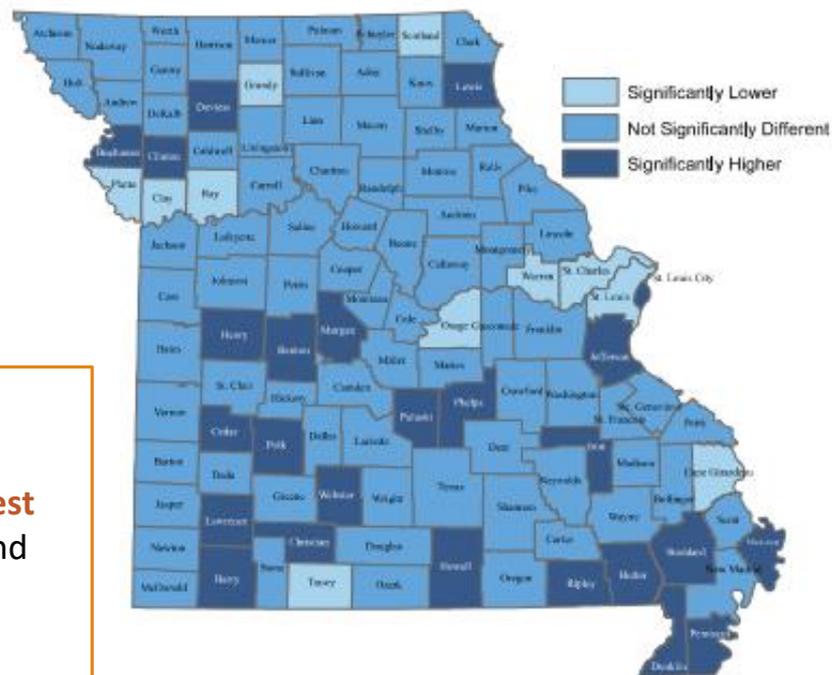
Source: DHSS, BHCADD

# Stroke - #5

	Rural	Urban
Frequency	13,369	20,227
Rate	45.40	41.61
Percent Change (2007 & 2017)	-23.79%	-11.78%

Age-adjusted rates per 100,000 population

Death rates from stroke  
Missouri, 2007-2017



While the rural rate of stroke mortality has been higher than the urban rate, **the gap has narrowed** considerably.

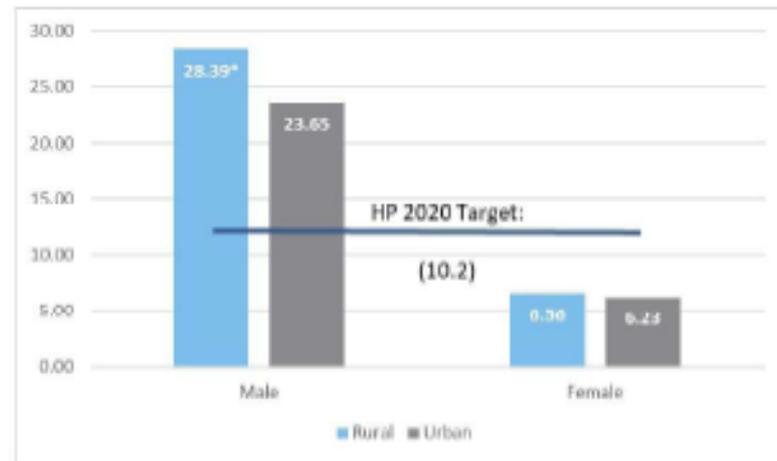
Rural counties have nine of the ten **highest** stroke death rates and 23 of the top 25.

Source: DHSS, BHCADD

# Suicide - #10

- Both rural and urban counties posted **increases** of greater than 35% between 2007 and 2017
- Suicide deaths in rural MO counties are **overwhelmingly male**
- Rural areas have a **significantly higher** suicide rate for seniors than urban areas

Death rates due to suicide  
Missouri, 2007-2017



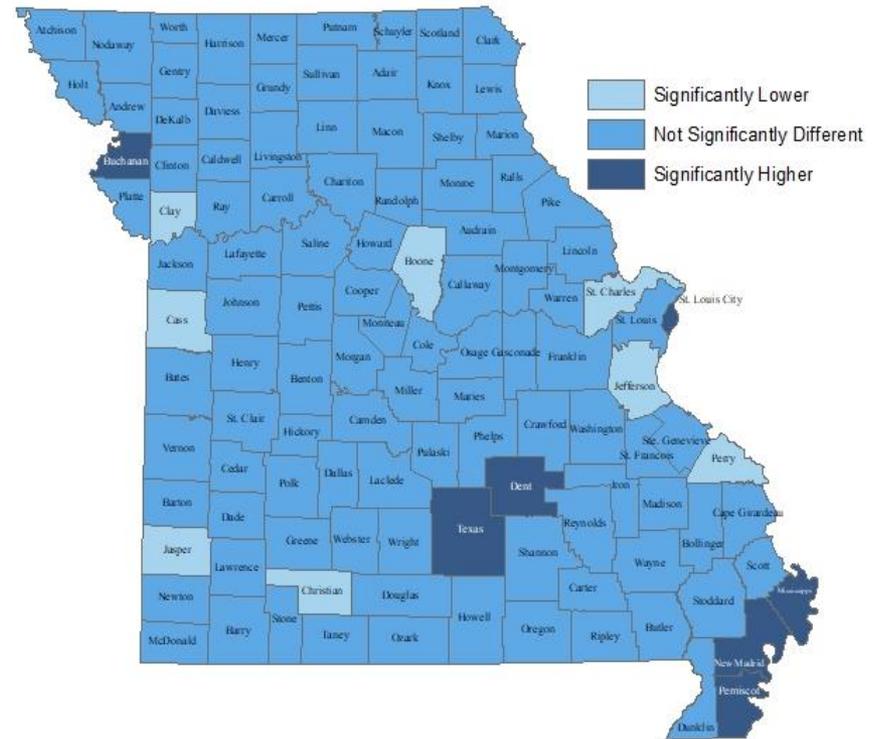
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*Age-adjusted rates* per 100,000 population

# Maternal and Child Health

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# Infant Mortality Rates

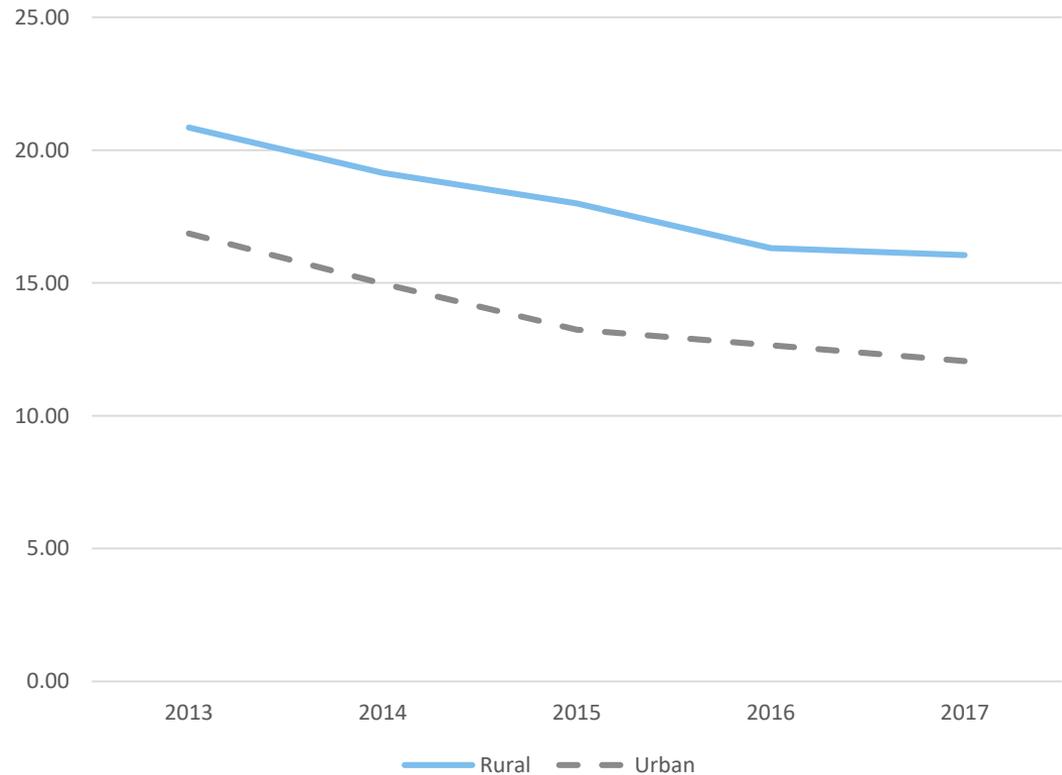
- Infant mortality rate was 7% **higher** in rural areas compared to urban counties.
- 7 counties had **significantly high** rates, the 5 rural counties were clustered in the Bootheel and south-central regions.



Rate per 100,000 Population Under age 1

# Teen Pregnancy Rates, 2013-2017

- Both groups have seen **steady decline** of ~27%
- Rural consistently about 30% **higher** than urban areas
- Top 5 highest counties are in southeast MO and 9 of 10 highest are rural



Rate per 1,000 Women age 15-19

Source: DHSS, BHCADD

# Recommendations from ORPC

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- State regulation and **policies** need to continue to consider the **unique qualities** that define rural health as well as the particularly difficult **healthcare challenges** that impact rural health systems.
  
- **Access** to health care services needs to **continue to improve**, or at the very least be sustained, throughout rural Missouri.

# Community Health Workers (CHW) & Chronic Disease

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*“If you know anything about Mississippi County you know we’re about fried chicken, fried fish, sweet tea, and diabetes.” – Dr. Richard Logan, Jr., PharmD*



In Charleston, MO a **long-time community pharmacist** is partnering with local health officials to **continually develop** a trusting relationship and **expand services** in their community by utilizing **CHWs**.

These community members are able to more **effectively communicate** with patients and address factors that are preventing patients from **accessing health care**.

# Community Health Workers (CHW) & Chronic Disease

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Source: Richard Logan, Jr. PharmD. Community Health Worker: The Staff Position You Never Knew You Needed. 2019.

# Community Health Workers (CHW) & Chronic Disease

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## A SNAPSHOT OF SERVICES

- Provide rides to primary care doctors and other appointments
- Enroll patients into preventive programs
- Work with patients to alleviate insurance coverage and payment issues
- Ongoing peer-to-peer engagement

## FOR MORE INFORMATION...

- Sandra Hentges, Bureau Chief, Cancer and Chronic Disease Control, DHSS

[Sandra.Hentges@health.mo.gov](mailto:Sandra.Hentges@health.mo.gov)

- Richard Logan, Jr., PharmD, L & S Pharmacy

[Rlogan@semorx.com](mailto:Rlogan@semorx.com)

# Acknowledgements

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Thank  
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## **Bureau of Health Care Analysis and Data Dissemination**

Andrew Hunter, Chief

Whitney Coffey, Research Analyst IV

Evan Mobley, Research Analyst IV

Tanner Turley, Research Analyst III

Jeremy Rowles, Research Analyst III

Chelsea Fife, Research Analyst II

Teresia Karuga, Research Analyst II

AJ Womack, Research Analyst II

## **Office of Epidemiology**

Erin Miller, Lead Chronic Disease Epidemiologist

Jiaqing Li, Research Analyst IV

## **Office of Rural Health and Primary Care**

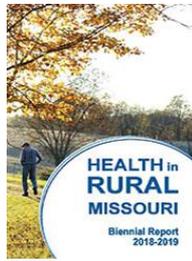
Kathryn Metzger, Rural Health Manager

Lisa Branson, Rural Health Coordinator

Lisa Eastman, Primary Care Manager

Sara Davenport, Loans Program Manager

Susan Liley, Project Specialist



# Contact Information

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## Andrew Hunter

- Email: [Andrew.Hunter@health.mo.gov](mailto:Andrew.Hunter@health.mo.gov)
- Phone: 573-526-0444

## Whitney Coffey

- Email: [Whitney.Coffey@health.mo.gov](mailto:Whitney.Coffey@health.mo.gov)
- Phone: 573-751-6285

## Sara Davenport

- Email: [Sara.Davenport@health.mo.gov](mailto:Sara.Davenport@health.mo.gov)
- Phone: 573-751-6072

Check out *Health in Rural Missouri, Biennial Report 2018-2019* at  
<https://health.mo.gov/living/families/ruralhealth/pdf/biennial2019.pdf>